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Swimming is good in more places as oceans everywhere smash heat records

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By Seth Borenstein, The Associated Press

WASHINGTON - July was the hottest month for the world's oceans in almost 130 years of record-keeping.

Meteorologists said there is a combination of forces at work: A natural El Nino weather pattern just getting started on top of worsening manmade global warming, and a dash of random weather variations. Already the resulting ocean heat is harming threatened coral reefs. It also could hasten the melting of Arctic sea ice and help hurricanes strengthen.

The Gulf of Mexico, where warm water fuels hurricanes, has temperatures dancing around 90 degrees (32 Celsius). Most of the water in the Northern Hemisphere has been considerably warmer than normal. The Mediterranean is about three degrees warmer than normal. Higher temperatures rule in the Pacific and Indian Oceans.

The phenomenon is most noticeable near the Arctic, where water temperatures are as much as 10 degrees (5.5 Celsius) above average. The tongues of warm water could help melt sea ice from below and even cause thawing of ice sheets on Greenland, said Waleed Abdalati, director of the Earth Science and Observation Center at the University of Colorado.

Breaking heat records in water is more ominous as a sign of global warming than breaking temperature marks on land, because water takes longer to heat up and does not cool as easily as land.

"This warm water we're seeing doesn't just disappear next year; it'll be around for a long time," said climate scientist Andrew Weaver of the University of Victoria in British Columbia. It takes five times more energy to warm water than land.

The warmer water "affects weather on the land," Weaver said. "This is another yet really important indicator of the change that's occurring."

Georgia Institute of Technology atmospheric science professor Judith Curry said water is warming in more places than usual, which has not been seen in more than 50 years.

Add to that an unusual weather pattern this summer where the warmest temperatures seem to be just over oceans, while slightly cooler air is concentrated over land, said Deke Arndt, head of climate monitoring at the climate data centre.

The pattern is so unusual that he suggested meteorologists may want to study that pattern to see what is behind it.

The effects of that warm water already are being seen in coral reefs, said C. Mark Eakin, co-ordinator of the National Oceanic and Atmospheric Administration's coral reef watch. Long-term excessive heat bleaches colorful coral reefs white and sometimes kills them.

Bleaching has started to crop up in the Florida Keys, Puerto Rico and the Virgin Islands. Typically, bleaching occurs after weeks or months of prolonged high water temperatures. That usually means September or even October in the Caribbean Sea, said Eakin. He found bleaching in Guam on Wednesday. It is too early to know whether the coral will recover or die. Experts are "bracing for another bad year," he said.

The problems caused by the El Nino pattern are likely to get worse, the scientists say.

An El Nino occurs when part of the central Pacific warms up, which in turn changes weather patterns worldwide for many months. El Nino and its cooling flip side, La Nina, happen every few years.

During an El Nino, temperatures on water and land tend to rise in many places, leading to an increase in the overall global average temperature. An El Nino has other effects, too, including dampening Atlantic hurricane formation and increasing rainfall and mudslides in Southern California.

Warm water is a required fuel for hurricanes. What's happening in the oceans "will add extra juice to the hurricanes," Curry said.

Hurricane activity has been quiet for much of the summer, but that may change soon, she said. Hurricane Bill quickly became a major storm and the National Hurricane Center warned that warm waters are along the path of the hurricane for the next few days.

Hurricanes need specific air conditions, so warmer water alone does not necessarily mean more or bigger storms, said James Franklin, chief hurricane specialist at the National Hurricane Center in Miami.

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On the Net:

National Climatic Data Center on July 2009: http://www.ncdc.noaa.gov/sotc/?report

NOAA's coastal water temperature guide: http://www.nodc.noaa.gov/dsdt/cwtg/all.html

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